

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Annual Report on AB 2588 Air Toxics “Hot Spots” Program

April 2011

Deputy Executive Officer
Planning, Rule Development and Area Sources
Elaine Chang, DrPH

Assistant Deputy Executive Officer
Planning, Rule Development and Area Sources
Laki Tisopulos, Ph.D., P.E.

Planning and Rules Manager
Naveen Berry

Author: Thomas Chico, Program Supervisor

Contributors: Victoria Moaveni, Sr. AQ Engineer
Robert Wu, AQ Specialist

Reviewed by: William Wong, Principal Deputy District Counsel

INTRODUCTION

This report satisfies Section 44363 of the California Health and Safety Code which requires the South Coast Air Quality Management District (AQMD) to annually prepare and publish a status and forecast report of the Air Toxics “Hot Spots” Information and Assessment Act (or AB 2588) activities. The main body of the report presents AB 2588 activities that occurred in calendar year 2010 and describes plans for future activities [Section 44363(a)(1)]. Appendix A lists facilities which have prepared health risk assessments for the AB 2588 program and their corresponding risks [Section 44363(a) (2) and (3)]. Appendix B describes the status of control measures and rules to reduce emissions of toxic air contaminants [Section 44363(a)(4)].

Background

In 1987, the California legislature adopted the Air Toxics “Hot Spots” Information and Assessment Act (or AB 2588). AB 2588 requires facilities to submit an air toxics inventory report (ATIR). A facility’s priority score is calculated from information in the ATIR.

AQMD staff follows the procedures in Health and Safety Code Section 44360 for prioritization and categorization of facilities. The potency, toxicity and amount of toxics released into the air, as well as the distance to workers, residents and sensitive receptors (such as hospitals, schools, and day care centers) are considered for prioritization and categorization. Facilities are assigned to high, medium, and low priority categories.

A facility with a priority score greater than ten (10) must provide a health risk assessment (HRA), following guidelines established by the State of California Office of Environmental Health Hazard Assessment (OEHHA),^[1] and supplemented by AQMD guidelines.^[2] If the risk reported in the HRA exceeds specific thresholds, then the facility is required to provide public notice to the affected community. The program is illustrated in Figure 1.

In 1992, the California legislature added a risk reduction component, the Facility Air Toxic Contaminant Risk Audit and Reduction Plan (or SB 1731), which required the District to specify a significant risk level, above which risk reduction would be required. In Rule 1402 – Control of Toxic Air contaminants From Existing Sources, the Governing Board set the significant risk level at a cancer risk of 100 in a million, and a total chronic or acute hazard index of 5.0. The Board also established action risk levels at a cancer burden of 0.5, a cancer risk of 25 in a million, and a hazard index of 3.0. One-time public notification and a public meeting are required for facilities with cancer risks greater than or equal to ten in a million or non-cancer acute or chronic hazard index greater than one. Rule 1402 requires annual public notice until the facility gets below the action risk levels.

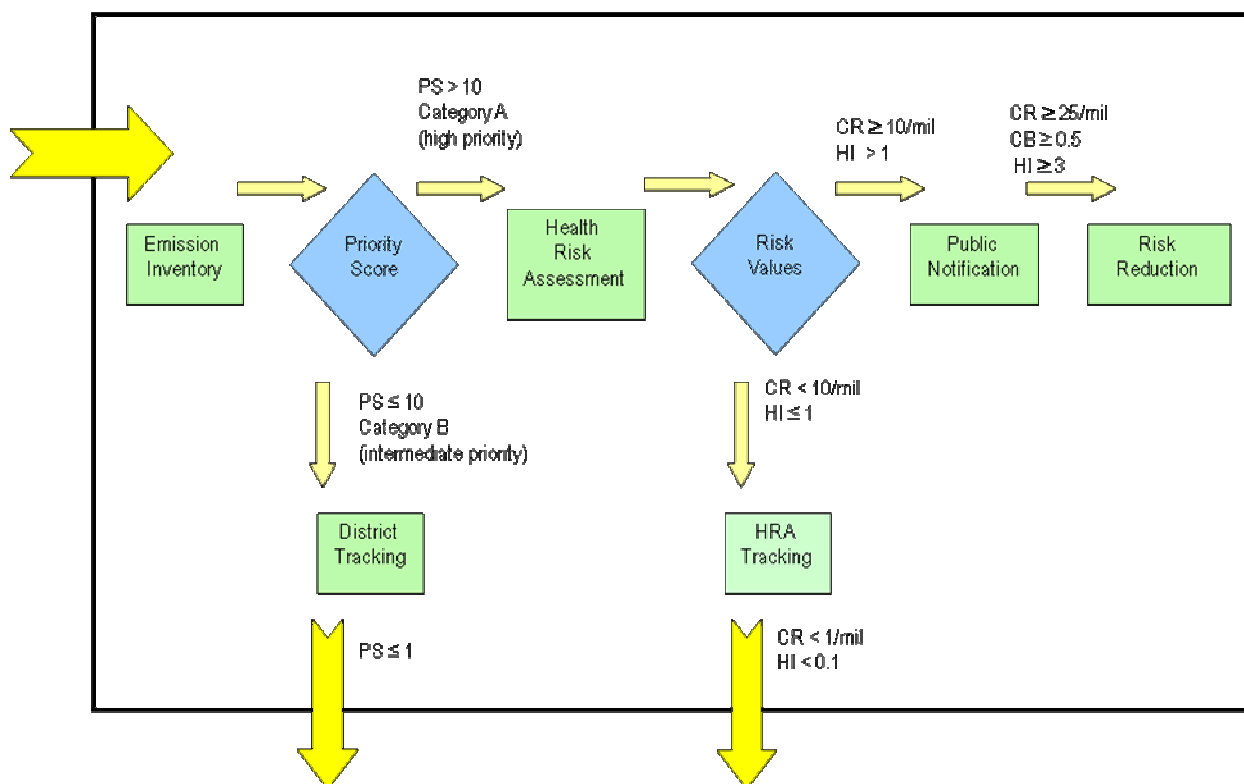


Figure 1. Schematic of the Hot Spots Program.
(CR = cancer risk; PS = priority score; HI = hazard index; CB = cancer burden)

Currently, AQMD staff uses the web-based Annual Emissions Reporting (AER) Program to obtain a preliminary toxic inventory used for facility prioritization. Facilities with priority scores greater than ten are then asked to submit a detailed ATIR and perform an HRA using CARB's Hotspots Analysis and Reporting Program (HARP).^[3]

Under AB2588, AQMD is required to use OEHHA's procedures^[1] to assess risks. These standardized procedures provide a valuable tool for statewide consistency in evaluating risks, communicating those risks to the public, and designing risk reduction programs.

However, it is also recognized that the estimates of health risks are based on the state of current knowledge, and the process has undergone extensive scientific and public review. However, there is uncertainty associated with the processes of risk assessment. This uncertainty stems from the lack of data in many areas necessitating the use of assumptions. The assumptions are consistent with current scientific knowledge, but are often designed to be conservative and on the side of health protection in order to avoid underestimation of public health risks.

As noted in the OEHHA risk assessment guidelines, sources of uncertainty, which may either overestimate or underestimate risk, include: (1) extrapolation of toxicity data in animals to humans, (2) uncertainty in the estimation of emissions, (3) uncertainty in the air dispersion models, and (4) uncertainty in the exposure estimates. Uncertainty may be defined as what is not known and may be reduced with further scientific studies. In

addition to uncertainty, there is a natural range or variability in the human population in such properties as height, weight, and susceptibility to chemical toxicants.

Thus, the risk estimates should not be interpreted as actual rates of disease in the exposed population, but rather as estimates of potential risk, based on current knowledge and a number of assumptions. However, a consistent approach to risk assessment is useful to compare different sources and different substances to prioritize public health concerns.

Universe

AQMD has nearly 500 facilities active in the program, more than any other air district in the state. A facility is considered active in the AB 2588 program if it is subject to Hot Spots fees and is required to update its toxic inventory once every four years. This includes facilities that have:

- cancer risks greater than or equal to one in a million; or
- non-cancer hazard index greater than or equal to 0.1; or
- priority score greater than 1.

Air districts were also permitted to identify Industry-wide categories. The facilities that qualify for these categories share the same Standard Industrial Classification (SIC) code, for the most part are small businesses that would suffer severe economic hardships by individual compliance, and can be easily and generically characterized. To date, the AQMD has identified seven Industry-wide categories:

- Retail Gasoline Dispensing,
- Perchloroethylene Dry Cleaning,
- Auto Body Shops,
- Fiberglass Molding,
- Printing,
- Metal Plating, and
- Wood Stripping / Refinishing.

The advantage to an Industry-wide category is that compliance may be handled collectively. The California Air Pollution Control Officers Association's (CAPCOA) Toxics Committee has been tasked with developing statewide emission inventory and risk assessment guidelines for several of these Industry-wide categories. Specifically, such guidelines have been completed for auto body shops^[4] and gasoline service stations.^[5] The guidelines for perchloroethylene dry cleaners^[6] are being finalized by CAPCOA. The guidelines provide a cost-effective and uniform method for calculating facility emissions and estimating toxic risks for the approximately 1,600 auto body shops, 3,200 gasoline service stations, and 800 perchloroethylene dry cleaners under the AQMD's jurisdiction. In this manner, the AQMD may prepare Industry-wide inventories, risk assessments, and public notices and risk reduction plans if necessary.

Facilities with only emergency diesel internal combustion engines (DICEs) are treated similarly to an Industry-wide category.

ACTIVITIES AND ACCOMPLISHMENTS

In calendar year 2010, the AB 2588 program staff accomplished the following:

- Reviewed nine (9) facility HRAs, which included four refineries;
- Approved five (5) facility HRAs;
- Conducted one (1) public notice meeting;
- Notified two (2) facilities to prepare HRAs;
- Conducted industry-wide risk assessment for retail gas stations;
- Supported and reviewed U.S. EPA's 2005 National-Scale Air Toxics Assessment;
- Updated the AQMD's prioritization procedures; and
- Added criteria and toxic emissions for calendar years 2008 and 2009 to the AB 2588 website and made it available to the public.

Several of these are further explained below.

ATIRs, HRAs, and Risk Reduction

To date, staff has reviewed and approved over 300 facility HRAs, 44 facilities were required to perform a public notice, and 21 facilities were subject to risk reduction. These 21 facilities are shown in Table 1.

Table 1. Status of Risk Reduction Plans

Fac. ID	Facility Name	Submitted?	Approved?	Implemented?	Residual Risk
7427	Owens-Brockway Glass	Yes	Yes	Yes	Acute HI: 0.01
7730	E.R. Carpenter	Yes	Yes	Yes	Chronic HI: 1.34
8015	Anadite Inc.	Yes	Yes	Yes	Cancer: 3.5
8547	Quemetco	Yes	Yes	Yes	Cancer: 4.4 Acute HI: 0.086 Chronic HI: 0.74 Can. Burden 0.023
8570	Embee Inc.	Yes	Yes	Yes	Cancer: 6.6
14191	Nicklors Chemical Co.	Yes	Yes	Yes	Non-cancer HIs: 0 (a)
15504	Schlosser Forge Co.	Yes	Yes	Yes	Cancer : 9.5 Chronic HI: 1.11
18294	Northrop-Grumman	Yes	Yes	Yes	Cancer: 7.6
22410	Palace Plating	Yes	Yes	Yes	Cancer: 5.6 Acute HI: 0.73 Chronic HI: 0.38
25012	Amada Manufacturing America, Inc.	Yes	Yes	Yes	Cancer: <0.1
41229	Lubeco, Inc.	Yes	Yes	Yes	Cancer: 14.0

continued

Table 1. concluded.

Fac. ID	Facility Name	Submitted?	Approved?	Implemented?	Residual Risk
45938	E.M.E. Inc.	Yes	Yes	Yes	Cancer: <0.1
48323	Sigma Plating Co.	Yes	Yes	Yes	Cancer: 13.8
61160	GE Engine Services	Yes	Yes	Yes	Acute HI: 0.7
116459	GE Engine Services	Yes	Yes	Yes	Cancer: 9.3
119127	PRC DeSoto International	Yes	Yes	Yes	Cancer: 0 (a)
126501	Vought Aircraft Industries, Inc.	Yes	Yes	Yes	Cancer: 19.7 (b)
134931	Alcoa Global Fasteners, Inc.	Yes	Yes	Yes	Cancer: 0.6
800037	DeMenno/Kerdoon	Yes	Yes	Yes	Cancer: 4.9 Acute HI: <0.01 Chronic HI: 0.02 Can. Burden 0.01
800063	Grover Products Co.	Yes	Yes	Yes	Cancer: 3.3
800196	American Airlines, Inc.	Yes	Yes	Yes	Cancer: 5.4 Acute HI: 0.86

(a) Facility left the South Coast Air Basin. Thus, risks are zero.

(b) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated.

The results of the approved facility HRAs, after the implementation of risk reduction plans, are summarized in Figures 2 and 3. Appendix A summarizes the cancer and non-cancer risk levels for each of the facilities that prepared an HRA. About 96 percent of the facilities now have cancer risks below ten in a million and over 98 percent of the facilities have acute and chronic non-cancer hazard indices less than 1.

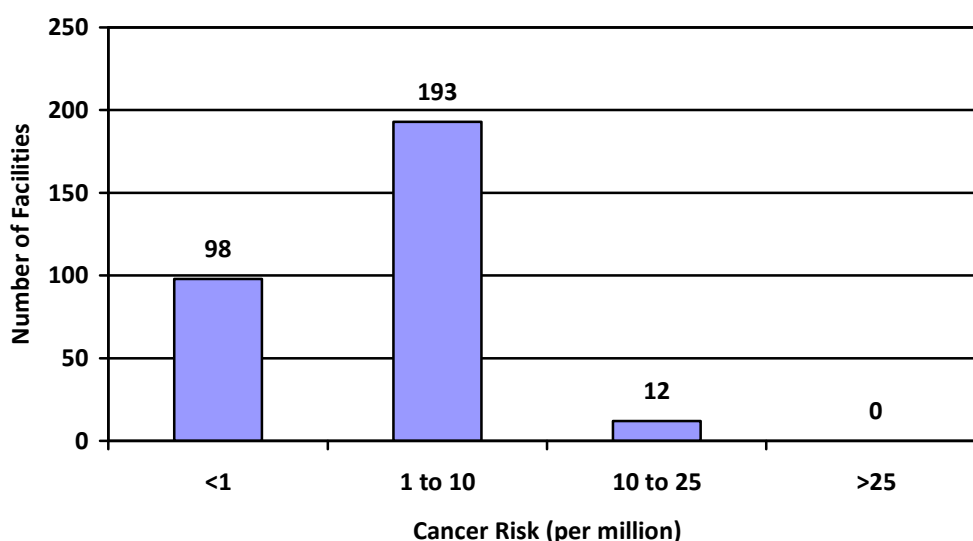


Figure 2. Summary of facility cancer risks.

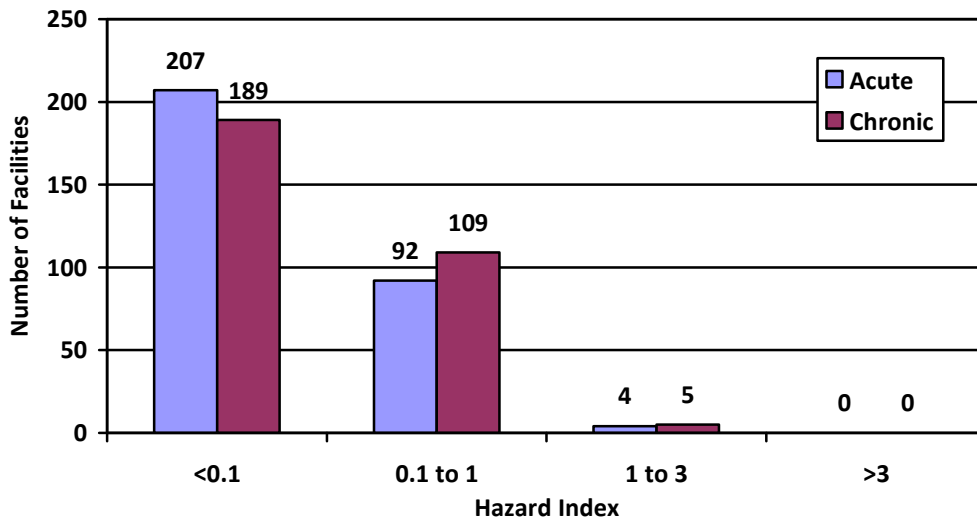


Figure 3. Summary of facility non-cancer risks.

Since the amendment of Rule 1402 on March 17, 2000, which established action risk levels, the AB 2588 staff identified 21 facilities that were required to reduce risks (see Table 1 on page 5). All facilities subject to risk reduction have fully implemented their respective plans. The HRA for Quemetco (ID 8547), which demonstrated Rule 1402 compliance, was approved in 2010.

In 2010, nine HRAs were reviewed including four refineries. Among these HRAs, five were approved as follows: ConocoPhillips Carson Plant (ID 800362), Calabasas Landfill (ID 42514), Commerce Refuse to Energy Plant (ID 37336), Foamex Innovations (ID 161142), and Quemetco (ID 8547).

A public notification meeting for Gas Recovery Systems, Coyote Canyon (ID 45448) was held on January 13, 2010 because the facility's maximum cancer risks were 20.1 in a million, which is above the public notification level of 10 in a million. Gas Recovery Systems, Coyote Canyon generates electricity from landfill gas and is located in Newport Coast in Orange county. The toxic chemicals contributing to the cancer risks were dioxins/furans, hexavalent chromium, and arsenic emitted from a direct fired boiler burning landfill gas. Nearly 200 households were notified and 12 members of the public, one representative from Sage Hill School, and one staff member from the City of Irvine attended the meeting. All questions and concerns were addressed either at the meeting or by follow-up communication.

National-Scale Air Toxics Assessment Support

Every three years, beginning in 1996, the U.S. EPA prepares a National-Scale Air Toxics Assessment (NATA).^[7] NATA is analogous to AQMD's Multiple Air Toxic Exposure Study (MATES). Whereas MATES looks at population risks in the four county jurisdiction of the AQMD, the 50 states are addressed in NATA. The purpose of NATA is to: (1) identify and prioritize the toxic air contaminants of greatest concern, (2)

determine the risk contribution from each of the major source categories (i.e., on-road, off-road, point, and area), and (3) identify local areas (i.e., census tracts) with elevated risks.

Significant AB2588 staff resources were dedicated to the analysis and review of preliminary and final versions of the 2005 NATA, which was released on March 11, 2011.^[8] The areas of focus were as follows:

- High cancer and non-cancer risk facilities (i.e., facilities with cancer risks > 100 in a million or a non-cancer chronic hazard index > 5);
- Local landfill sites with significant acrylonitrile emissions; and
- Local general aviation airports.

U.S. EPA provided a list of 57 high risk facilities for review. It was learned from our experience with the 2002 NATA that the emission data for large stationary sources used in NATA is often outdated and/or incorrect. Results from our review of the 2005 NATA high risk facilities confirmed this. Of the 57 facilities that the U.S. EPA identified as high risk, 35 were out of business prior to 2005 and 12 facilities have either eliminated or reduced their respective risk drivers by more than 85 percent. The audit revealed a fundamental problem with respect to NATA data compilation. The data submitted to U.S. EPA via CARB was not used to replace the previous data submittal, but to update the emission data when it is for the same facility and same pollutant. Business turnovers and material changes from more toxic to less toxic chemicals were not recognized by the current process and got carried over year to year as if unchanged. Fortunately, U.S. EPA acknowledged the problem and eliminated all stationary source emission data originating from the 2002 National Emission Inventory (NEI).

Staff continues to work with CARB and U.S. EPA staffs to develop an improved emissions data exchange protocol so that staff resources can be focused on auditing true high risk facilities and not on scrubbing the emissions data base of inactive facilities. During 2010, a committee was formed and several conference calls were held. U.S. EPA Region 9 staff developed a data exchange protocol that is currently being reviewed within U.S. EPA. These efforts will continue in 2011.

Anyone reviewing the 2005 NATA results^[8] must consider the following caveats for the study:

- The U.S. EPA did not quantify the cancer risks associated with diesel particulate emissions. Thus, the magnitude of the cancer risks are much less than those associated with the AQMD's MATES III Study.^[9] Also as a result of excluding diesel particulate, the onroad and offroad cancer risk contributions are proportionally less in the 2005 NATA.
- MATES III and NATA 2005 used different sources for their respective health values (i.e., cancer potencies, reference concentrations, and reference exposure levels). OEHHA was the source of all the health values for MATES III whereas

NATA 2005 relied primarily on IRIS (Integrated Risk Information System) followed in priority by ATSDR (Agency for Toxics Substances and Disease Registry) and lastly OEHHA.

- Caution is urged when comparing risks from different sections of the U.S. because the emissions data underlying the NATA vary in the level of detail from state to state.

Industry-wide Gas Station Risk Assessment

An industry-wide risk assessment was performed for retail gas stations (3,140 facilities) using permitted emissions, dispersion modeling, and risk assessment procedures approved by the Governing Board in 2007.^[10] The three key variables necessary to estimate cancer risks from retail gas stations are:

- Gasoline throughput, usually expressed as million or thousand gallons per month or per year;
- Distance to the nearest residential and commercial receptor; and
- Location of the retail gas station, which is necessary for determining the appropriate meteorological site.

Permitted throughput was used instead of actual throughput for a couple of reasons. First of all, it is a conservative approach since a facility's actual throughput can fluctuate from year to year, but should always be less than or equal to its permitted throughput. Further, use of permitted throughput addresses concerns that full rule compliance at retail gas stations on a continuous basis is less certain based on AQMD field inspections.

Benzene is the primary carcinogen and its emissions are proportional to the volume of gasoline sales at the facility. The gasoline vapor and benzene emission factors are provided in Table 2.

Loading emissions occur when a fuel tanker truck unloads gasoline to the storage tanks. The storage tank vapors, displaced during loading, are emitted through its vent pipe. A pressure/vacuum valve installed on the tank vent pipe significantly reduces these emissions. **Breathing** emissions occur through the storage tank vent pipe as a result of temperature and pressure changes in the tank vapor space. **Refueling** emissions occur during motor vehicle refueling when gasoline vapors escape through the vehicle/nozzle interface. **Spillage** emissions occur from evaporating gasoline that spills during vehicle refueling.

Staff made use of throughput limits available in the AQMD's permit database in addition to proximity to the nearest residential and occupational locations when available. For the older permits without a throughput condition, a monthly throughput value was calculated utilizing each facility's VOC emissions listed in the AQMD's permit database. Furthermore, for facilities without reported receptor distances, staff calculated the distance from the facility to the nearest census block centroids. The census block centroids were obtained from a database in the HARP modeling system.^[3]

Table 2. Gasoline and Benzene Controlled Emission Factors for Retail Service Stations^[10]

Process	Gasoline EF (lbs/1000 gal)	Benzene EF (lbs/1000 gal)	Comment
Loading	0.42	0.00126	benzene weight percent in vapor is 0.3%
Breathing	0.025	0.000075	benzene weight percent in vapor is 0.3%
Refueling	0.32	0.00096	benzene weight percent in vapor is 0.3%
Spillage	0.42	0.0042	benzene weight percent in liquid is 1.0%

Modeling was performed relying on meteorological data collected at 35 AQMD stations shown in Figure 4. These data are also available on the AQMD website.^[11] A polar receptor grid is assumed at ten degree azimuth increments at the following downwind distances: 25, 30, 40, 50, 60, 70, 80, 90, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, and 1000 meters.

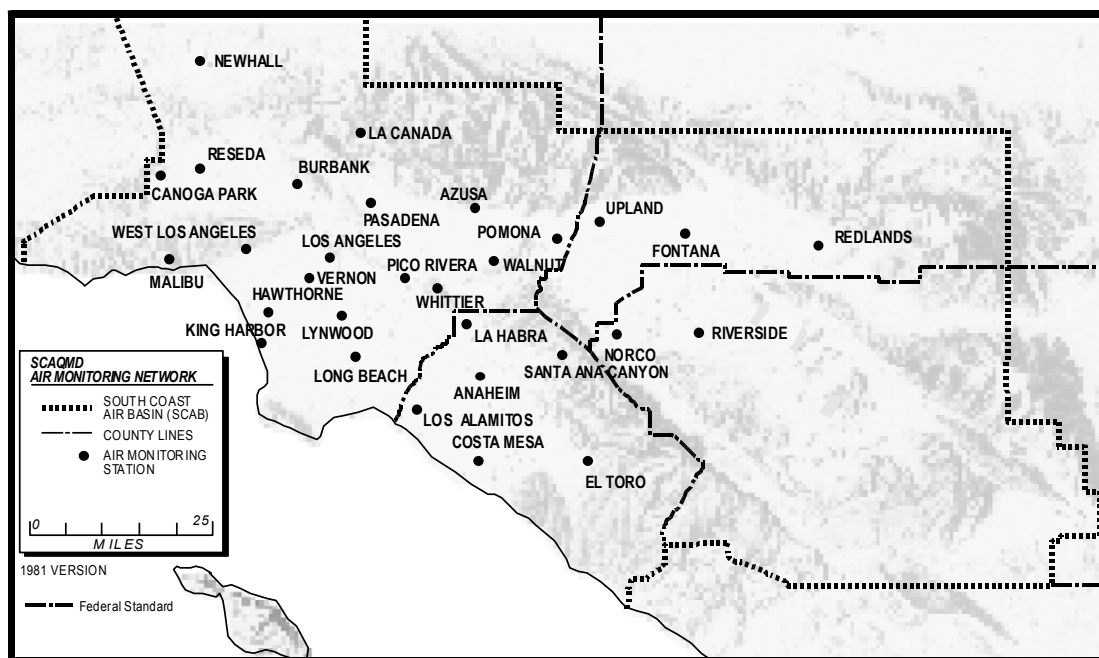


Figure 4. Meteorological monitoring stations in the South Coast Air Basin.

The modeling results are shown in Figure 5 for six representative meteorological sites for a one million gallon per year retail gas station. The figure illustrates the importance of receptor distance and location for estimating cancer risks from a retail gas station. Impacts decrease sharply with increasing distance from the facility and impacts can vary by more than a factor of two depending on the meteorological site used in the modeling. Lastly, the benzene emissions and cancer risks are directly proportional to throughput. Thus, if the throughput is doubled to two million gallons per year then the risks in Figure 5 would be doubled.

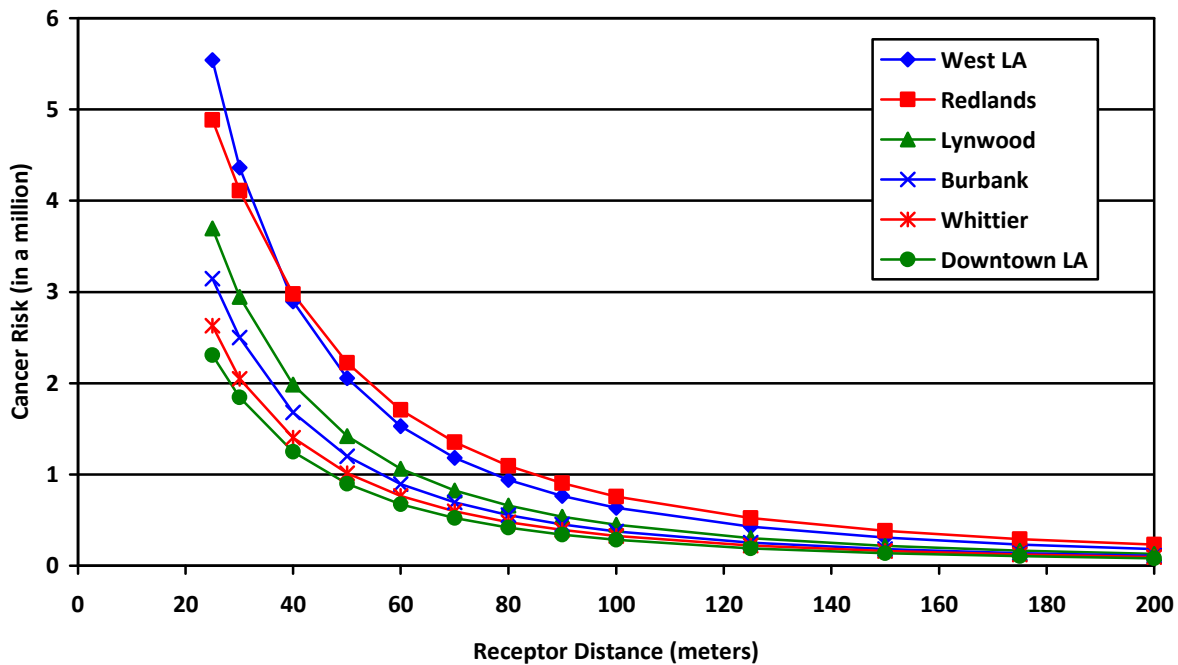


Figure 5. Cancer risks versus receptor distance and meteorological site for a gas station with a one million gallon per year throughput.

The cancer risks from 3,140 retail gas stations in AQMD were estimated using the procedures outlined above and the results are summarized in Figure 6. The facilities are distributed over the four counties as follows: 1,734 in Los Angeles county, 599 in Orange county, 439 in Riverside county, and 367 in San Bernardino county.

Over 90 percent of the retail gas stations have risks less than 10 in a million. About nine percent of the stations have risks above ten in a million. About half of the facilities associated with these higher risks and all four of the facilities with risks greater than 25 in a million were established prior to the AQMD's Rule 1401 which was adopted June 1990 and were thus not subject to its limits. Also, it is expected that residential and commercial development has, over time, encroached upon many of the retail gas stations, bringing receptors closer, and thus increasing risks. As mentioned earlier, these risks are potentially over-estimated since they are based on permit limits and not actual throughput. It is important to keep in mind that the higher risks are also associated with receptors in close proximity to the retail gas station. As shown in Figure 5, risks decrease by nearly 90 percent as receptor distances increase from 25 meters to 100 meters.

The 1,121 retail gas stations with risks less than one in million will be exempt from annual state and local industry-wide "hot spot" fees of \$185 (\$150 local fee and \$35 state fee). This results in an AQMD revenue loss of approximately \$168K.

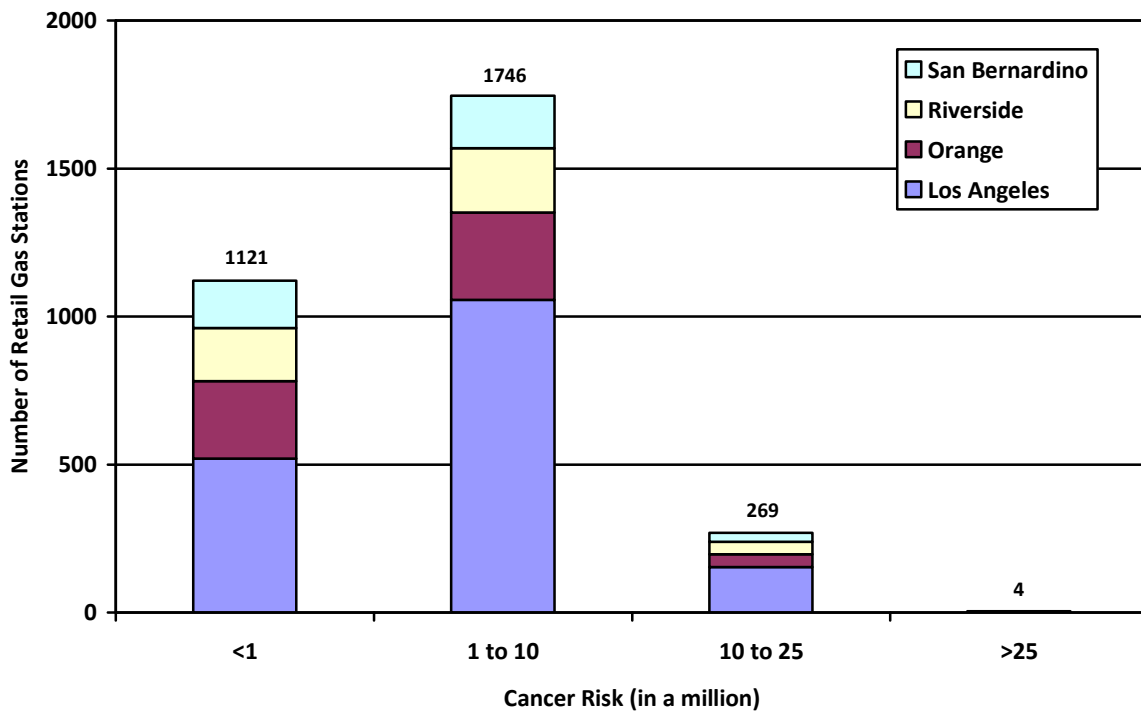


Figure 6. Cancer risks distribution for retail gas stations.

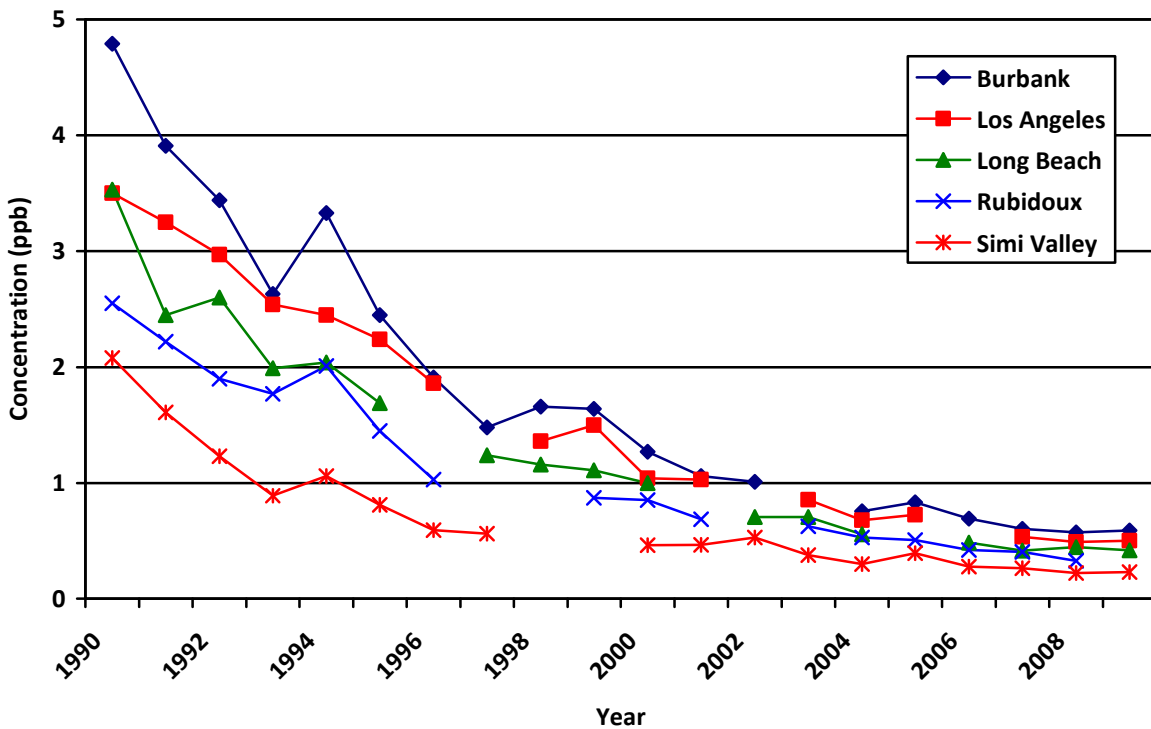


Figure 7. Trends in annual average benzene concentrations (parts per billion).^[12]

Although retail gas stations are a relatively minor source of benzene in the South Coast Air Basin, it is an opportune time to note the trends of measured benzene concentrations. As shown in Figure 7 above, in the 20 years since 1990, benzene concentrations in southern California have decreased by 86 to 89 percent in spite of a 25 percent increase in population. Four of the stations shown are in the South Coast air basin. Simi Valley is in Ventura county but is shown here since it represents expected trends in the San Fernando Valley.

As a result of performing the retail gas station industry-wide risk assessment discussed here, for the four facilities with cancer risks greater than 25 in a million, staff:

- Obtained actual facility throughputs in recent years and found that for three of the four facilities the actual gasoline throughputs are substantially less than calculated allowable levels. This reduced peak cancer risks for three of the four facilities to below 25 in a million.
- Verified receptor distances and determined that the residential distances are actually further away than initially estimated for three of the four facilities. This resulted in reduced risks for three of the four facilities.
- Concluded, as a result of the above two adjustments, that none of the four facilities currently exceed 25 in a million cancer risks based on their recent actual gasoline throughput.

However, there remains a potential for these four facilities to exceed 25 in a million cancer risks based on their allowable levels. As a result, staff will seek to establish allowable throughput levels for each of the four facilities to ensure that facility-wide cancer risk is less than 25 in a million.

Update of Prioritization Procedures

AB 2588 requires the AQMD to designate high, intermediate and low priority categories and include each facility within the appropriate category based on its individual priority. Based on the requirements of AB 2588, the AQMD's prioritization procedure considers the potency, toxicity, quantity, and volume of hazardous materials released from the facility and the proximity of the facility to potential receptors, including, but not limited to, hospitals, schools, daycare centers, worksites and residences. The AQMD procedures also include adjustment factors for exposure period and the treatment of multi-pathway pollutants.

The procedures were updated, based on OEHHA guidance,^[1] to use cancer potencies instead of unit risk factors to calculate the carcinogenic score. Also, the procedures were modified to accommodate separate sets of multi-pathway factors for residential and worker exposures. In addition to inhalation pathway, other pathways of exposure include home grown produce, dermal adsorption, soil ingestion, and mother's milk. The residential multi-pathway factors included the effects of the all these pathways, whereas worker multi-pathway factors only include the effects of dermal adsorption and soil

ingestion. As a result of these new procedures residential priority scores are expected to increase by a couple percent and worker priority scores increased by about 25 percent attributable to an increased worker breathing rate assumed in the calculation. The updated prioritization procedures are available on the AQMD website.^[13]

FUTURE ACTIVITIES

In 2011, staff plans to perform the following tasks:

Develop Internal Procedures for Addressing Emission Inventory, Risk Assessment, and Public Notification Procedures for the Other Industry-wide Categories

Staff will develop an internal work plan for addressing emission inventory, risk assessment, and public notification procedures for the Industry-wide category of auto body shops (approximately 1,500 facilities).

Review U.S. EPA Toxic Release Inventory and NATA Data

In cooperation with the U.S. EPA and the CARB, develop toxic emission data handling protocols to improve the accuracy of future NATA reports, and continue to review future TRI and NATA data. The 2008 NATA is scheduled for release in 2012 so it is expected that staff will devote resources to its analysis and review. Areas of particular interest are the improvement of the landfill database used by NATA, updates to aircraft emissions modeling, and considerations for diesel particulate emissions as a carcinogen.

Implement Public Notification Procedures for the Industry-wide Categories of Gasoline Stations and Perchloroethylene Dry Cleaners

An important task for 2011 is to publish cancer risks from retail gas stations and perchloroethylene dry cleaners on the AQMD website.

Prioritization of AB 2588 Facilities

Staff will prioritize about 100 to 200 facilities and notify those with high priority scores to prepare detailed Air Toxics Inventory Reports (ATIRs) and HRAs.

HRA and ATIR Review and Approval

Staff anticipates the review of about 15 facility HRAs and 8 detailed ATIRs.

NOTES AND REFERENCES

- [1] OEHHA. 2003. The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. The document is available at http://www.oehha.org/air/hot_spots/HRAguidefinal.html.
- [2] AQMD. 2005. Supplemental Guidelines for Preparing Risk Assessments to Comply with the Air Toxics 'Hot Spots' Information and Assessment Act. The document is available at http://www.aqmd.gov/prdas/AB2588/AB2588AB2588_B3.html under the bullet item labeled "AQMD risk assessment guidelines."

- [3] CARB. 2005. Hotspots Analysis and Reporting Program (HARP). Link to HARP is <http://www.arb.ca.gov/toxics/harp/harp.htm>.
- [4] CAPCOA. 1996. Auto Bodyshop Industry-wide Risk Assessment Guidelines. Prepared by CAPCOA, September 1996. The document is located at the following link: <http://www.arb.ca.gov/ab2588/riskassess.htm>.
- [5] CAPCOA. 1997. Gasoline Service Station Industry-wide Risk Assessment Guidelines. Prepared by CAPCOA, December 1997. The document is located at the following link: <http://www.arb.ca.gov/ab2588/riskassess.htm>.
- [6] CAPCOA. 2003. Perchloroethylene Dry Cleaner Industry-wide Risk Assessment Guidelines. Prepared by CAPCOA, January 13, 2003 (Draft). The document is located at the following link: <http://www.arb.ca.gov/ab2588/riskassess.htm>.
- [7] The U.S. EPA's web portal to NATA is at: <http://www.epa.gov/ttn/atw/natamain/>.
- [8] U.S. EPA's web portal to the 2005 NATA is <http://www.epa.gov/ttn/atw/nata2005/>.
- [9] Multiple Air Toxics Exposure Study III (MATES III) is a monitoring and evaluation study conducted by the AQMD in the South Coast Air Basin (Basin). Its website is available at: <http://www.aqmd.gov/prdas/matesIII/matesIII.html>.
- [10] AQMD. 2007. "Emission Inventory and Risk Assessment Guidelines for Gasoline Dispensing Facilities." The document is in the attached material for agenda item #28 of the January 5, 2007 AQMD Governing Board Meeting. To download the information go to: <http://www.aqmd.gov/hb/2007/January/0701ag.html>.
- [11] Meteorological data are at: <http://www.aqmd.gov/smog/metdata/ISCST3.html>.
- [12] The Air Resources Board has collected air toxics data at sites throughout California since 1989 and the data are available at the following website: <http://www.arb.ca.gov/adam/toxics/toxics.html>.
- [13] AQMD's updated prioritization procedures are available at the following website: http://www.aqmd.gov/prdas/AB2588/AB2588_B2.html.

Appendix A

Health Risk from Facilities with an Approved Health Risk Assessment (HRA)

The table in Appendix A lists the facilities and the current risks as reviewed and approved by the AB 2588 staff. In most instances, the listed risks are from an approved HRA. However, in some instances, the risks are those after the implementation of a risk reduction plan. See Table 1, included in the report, for the status of the facility's risk reduction plan. Attention should also be given to the other footnotes in the table denoting facilities with updated HRAs pending approval and facilities with risk including emergency DICEs. It also provides current status of each facility as follows:

- A – Active
- I – Inactive
- OB – Out of business (with the year in which the facility went out of business)

“Inactive” and “out of business” facilities have been retained for historical purposes since staff occasionally receives public inquiries regarding “inactive” or “out of business” facilities. Staff realizes that facilities that have gone through change of ownership could have different name and facility ID numbers. To keep the historical data intact, the facility name and IDs in Appendix A represent the information that was valid at the time that the HRA was finalized. The table lists the facilities in the order of their cancer risk. The following risk levels are identified in AQMD Rule 1402 – Control of Toxic Air Contaminants from Existing Sources:

- **Action Risk Levels:** Cancer risk ≥ 25 in a million; Acute HI ≥ 3.0 ; Chronic HI ≥ 3.0 , Cancer Burden ≥ 0.5
- **Public Notification Levels:** Cancer risk ≥ 10 in a million; Acute HI > 1.0 ; Chronic HI > 1.0
- **Exemption Levels:** Cancer risk < 1 in a million; Acute HI < 0.1 ; Chronic HI < 0.1

Appendix A

Health Risks from Facilities with an Approved HRA

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
122822	I	CONSOLIDATED FILM INDUSTRIES	Hollywood	21.00	n/a	0.11	0.40	2000
45448	A	GAS RECOVERY SYSTEMS, INC.	Irvine	20.1	0.18	0.56	0.32	2009
14495	A	VISTA METALS CORP.	Fontana	19.80	0.057	0.01	0.29	2008
126501	A	VOUGHT AIRCRAFT INDUSTRIES (b)	Hawthorne	19.70	n/a	0.64	0.24	2001
114927	A	ANVIL CASES / A CALZONE COMPANY	Industry	19.00	n/a	0.13	0.08	2002
11142	OB (2003)	KEYSOR-CENTURY CORP	Saugus	17.00	n/a	0.54	0.06	2000
18989	A	BOWMAN PLATING CO. INC.	Compton	14.20	0.021	<0.01	<0.01	2007
41229	A	LUBECO, INC.	Long Beach	14.02	n/a	0.00	0.12	2003
35302	A	OWENS CORNING FIBERGLASS CORP. (c)	Compton	14.00	0.015	0.07	0.10	2000
48323	A	SIGMA PLATING COMPANY	La Puente	13.84	0.017	0.01	0.74	2004
18648	OB (2006)	CROWN CITY PLATING COMPANY	El Monte	11.99	0.130	0.39	0.13	2000
29110	A	OR. CO., SANITATION DIST	Huntington Beach	10.70 (d)	0.210	1.78	0.48	2007
106797	OB (2005)	SAINT-GOBAIN CONTAINERS LLC	Los Angeles	9.85	n/a	0.00	0.07	2000
101380	OB (2005)	GENERAL DYNAMICS OTS (DOWNEY) INC	Downey	9.80	n/a	0.01	0.05	2000
148925	A	CHERRY TEXTRON	Santa Ana	9.70	n/a	0.07	0.15	1999
800183	A	PARAMOUNT PETROLEUM CORPORATION	Paramount	9.61	n/a	0.02	0.01	2002
800318	A	GRISWOLD INDUSTRIES	Costa Mesa	9.51	0.009	0.10	0.01	2001
15504	A	SCHLOSSER FORGE CO.	Rancho Cucamonga	9.50	0.067	1.59	1.11	2003
800149	A	US BORAX & CHEM CORP	Wilmington	9.46	n/a	0.00	0.03	2000
10510	OB (2009)	GREGG INDUSTRIES INC.	El Monte	9.40	0.010	0.60	0.56	2008

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
155828	A	GARRETT AVIATION SERVICES INC.	Los Angeles	9.33	n/a	0.91	0.10	2005
42922	OB (2006)	CMC PRINTED BAG INC	Whittier	9.00	n/a	<0.01	<0.01	1995
800396	A	BP WEST COAST PRODUCTS, ARCO VINVALE	South Gate	9.00	0.023	<0.01	0.03	1994
3525	A	P.B. FASTENERS	Gardena	8.91	0.010	0.09	0.06	1999
800089	A	EXXON-MOBIL OIL CORPORATION	Torrance	8.90	0.380	0.06	0.05	2001
1744	A	KIRKHILL RUBBER CO	Brea	8.70	0.001	0.20	0.06	2007
800431	A	PRATT & WHITNEY ROCKETDYNE, INC.	Canoga Park	8.70	0.130	<0.01	<0.01	1995
44454	A	STRUCTURAL COMPOSITES INDUSTRIES, INC.	Pomona	8.60	0.001	0.01	0.23	2002
800363	A	CONOCO-PHILLIPS CO.	Wilmington	8.60	0.282	0.98	0.07	2001
2680	A	LA CO., SANITATION DISTRICT	Whittier	8.57	n/a	0.00	0.03	1999
15736	A	HENRY CO	Hunt. Park	8.50	0.026	0.00	0.00	2000
800057	A	GATX TANK STORAGE TERMINAL CORP	Carson	8.50	n/a	0.01	0.06	1999
800079	A	PETRO DIAMOND TERMINAL CO	Long Beach	8.30	n/a	0.00	0.16	1998
125281	OB (2004)	MODERN PLATING ALCO CAD-NICKEL PLATING	Los Angeles	8.20	n/a	0.10	0.01	1997
21615	OB (2004)	OPTICAL RADIATION CORP	Azusa	8.08	n/a	0.17	0.10	1998
110924	A	WESTWAY TERMINAL COMPANY	San Pedro	8.00	0.370	0.33	0.51	1997
3609	A	AL'S PLATING CO INC	Los Angeles	7.81	n/a	0.26	0.17	1999
37603	A	POLYCARBON INC	Valencia	7.80	0.012	0.01	0.36	1998
800182	A	RIVERSIDE CEMENT CO. (c)	Riverside	7.80	n/a	0.05	0.13	2001
800436	A	TESORO REFINING AND MARKETING CO	Wilmington	7.80	n/a	0.33	0.45	2000
13920	A	ST. JOSEPH HOSPITAL	Orange	7.73	0.014	0.79	0.26	2008
18294	A	NORTHROP CORP., AIRCRAFT DIV. - WEST	El Segundo	7.60	n/a	0.13	0.05	2000

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
113170	A	SANTA MONICA HOSPITAL MEDICAL CTR UNIT 2 (b)	Santa Monica	7.60	0.000	0.17	0.01	1997
800214	A	LA CITY, HYPERION TREATMENT PLANT (c)	Playa del Rey	7.59	0.027	0.06	0.01	1999
20197	A	LAC/USC MEDICAL CENTER	Los Angeles	7.50	0.031	0.70	0.38	2007
800032	A	CHEVRON U.S.A. INC	Montebello	7.46	0.143	0.01	0.18	1999
800150	A	US GOVT., AF DEPT, MARCH AFB	Riverside	7.35	0.020	0.31	0.01	2008
108701	A	BALL FOSTER GLASS CONTAINER CO.	El Monte	7.30	0.056	0.09	0.07	2000
117560	A	EQUILON ENTER, LLC-SHELL OIL PROD. US	Wilmington	7.30	n/a	0.03	0.07	1998
131003	A	BP WEST COAST PRODUCTS LLC	Carson	7.28	n/a	0.30	0.08	2000
800113	A	ROHR IND INC	Riverside	7.20	0.011	0.86	0.02	2007
800236	A	LA CO., SANITATION DIST UNIT NO.01	Carson	7.20	0.058	0.17	0.12	2007
49387	A	UNIV CAL RIVERSIDE	Riverside	7.13	0.220	0.00	0.04	1999
57094	A	G S ROOFING PRODUCTS CO INC (c)	Wilmington	7.00	n/a	0.01	0.01	2000
140499	A	AMERESCO HUNTINGTON BEACH, LLC	Huntington Beach	7.00	n/a	<0.01	<0.01	1995
55449	A	BKK CORPORATION, LANDFILL DIVISION GNRL	W. Covina	6.90	n/a	0.01	0.10	2000
800372	A	EQUILON ENTERPRISES,LLC	Carson	6.90	0.030	0.44	0.07	2001
42514	A	LA CO., SANITATION DIST., CALABASAS LANDFILL	Agoura	6.78	0.00	0.02	<0.01	2010
5723	A	AEROCHEM INC	Orange	6.70	0.004	0.02	0.10	1999
34764	A	CADDOCK ELECTRONICS, INC.	Riverside	6.70	0.034	0.01	0.09	2002
8570	A	EMBEE INC	Santa Ana	6.62	n/a	0.21	0.58	2001
800362	A	CONOCO-PHILLIPS CO.	Carson	6.6	0.11	0.03	0.26	2011
17301	A	OR CO., SANITATION DIST	Fountain Valley	6.60	0.032	0.39	0.34	2007
6643	A	TECHNICOLOR, INC	N. Hollywood	6.53	0.003	0.03	0.08	2007

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
141585	A	RESOLUTION SPECIALTY MATERIALS, LLC	Lynwood	6.50	0.150	0.13	1.60	1995
11726	A	GE ENGINE SERVICES	Ontario	6.46	n/a	0.12	0.59	1999
2852	A	WALT DISNEY CO	Burbank	6.40	0.031	0.02	0.02	1997
800066	A	HITCO	Gardena	6.40	0.310	0.34	0.05	1998
1226	A	HYATT DIE CAST & ENGINEERING CORP	Cypress	6.24	0.008	<0.01	0.12	1996
800067	A	BOEING SATELLITE SYSTEMS INC	El Segundo	6.22	n/a	0.03	0.08	2000
146570	A	ROHM AND HAAS CHEMICALS LLC	La Mirada	6.20	n/a	0.54	0.76	1999
45262	A	LA CO, SANITATION DISTRICT UNIT NO.02	Glendale	6.17	n/a	0.01	0.05	1998
800026	A	ULTRAMAR INC.	Wilmington	6.08	n/a	0.80	0.07	2002
800267	A	DV INDUSTRIES, INC.	Lynwood	6.06	0.000	<0.01	0.01	2007
140961	A	GKN AEROSPACE TRANSPARENCY SYS INC	Garden Grove	6.00	n/a	<0.01	0.49	1996
800022	A	CALNEV PIPE LINE CO	Bloomington	5.90	n/a	0.00	0.07	1999
800198	A	ULTRAMAR INC	Wilmington	5.90	n/a	0.01	0.09	1999
800279	A	SFPP, L.P.	Orange	5.85	n/a	0.00	0.24	1999
8578	OB (2002)	ASSOCIATED CONCRETE PROD. INC	Santa Ana	5.80	n/a	0.13	0.57	1999
136148	A	E/M CORP, GREAT LAKES CHEMICAL CORP SUB	N Hollywood	5.80	0.000	0.28	0.57	1998
800129	A	SO PACIFIC PIPELINES INC	Rialto	5.75	n/a	<0.01	0.02	1996
154540	A	ARROWHEAD BRASS PROD. INC	Los Angeles	5.70	n/a	0.26	0.04	1995
800288	A	UNIV CAL IRVINE UNIT NO 01	Irvine	5.64	n/a	0.00	0.07	1996
22410	A	PALACE PLATING	Los Angeles	5.60	n/a	0.73	0.38	2004
38971	A	RICOH ELECTRONICS INC	Irvine	5.60	0.007	0.02	0.39	1995
43201	A	SNOW SUMMIT SKI CORP	Big Bear Lake	5.53	0.003	0.01	0.01	2007

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
14146	A	MAC GREGOR YACHT CORP	Costa Mesa	5.50	n/a	0.00	0.10	1998
54424	A	L & L CUSTOM SHUTTERS	Placentia	5.50	0.000	0.15	0.21	2001
800409	A	TRW INC.	Redondo Beach	5.48	n/a	0.45	0.24	1998
800196	A	AMERICAN AIRLINES, INC.	Los Angeles	5.40	0.190	0.86	0.08	2005
800171	A	MOBIL OIL CO	Vernon	5.33	0.016	0.07	0.02	1997
134018	A	INDUSTRIAL CONTAINER SERVICES	Montebello	5.24	n/a	0.57	0.23	2000
4477	A	SOUTHERN CALIFORNIA EDISON COMPANY	Avalon	4.98	0.004	0.05	0.20	1997
109198	A	TORCH OPERATING CO. (STEARNS GAS CO)	Brea	4.97	n/a	0.05	0.01	2001
800037	A	DEMENNO/KERDOON	Compton	4.9	0.01	<0.01	0.02	2009
103888	A	A J INDUSTRIES INC, SARGENT-FLETCHER CO	El Monte	4.90	0.280	0.16	0.02	1999
11192	A	HI-SHEAR CORP	Torrance	4.80	0.002	0.04	0.02	2008
800038	A	DOUGLAS AIRCRAFT CO	Long Beach	4.80	n/a	0.15	0.11	1999
800264	A	EDGINGTON OIL, CO.	Long Beach	4.78	0.001	0.01	0.01	2002
101977	A	AMERIGAS PROPANE L.P.	Long Beach	4.70	0.002	0.59	0.97	1998
3950	A	CROWN CORK & SEAL COMPANY, INC.	La Mirada	4.60	0.000	0.00	0.11	1997
83102	A	LIGHT METALS	Industry	4.50	0.008	0.04	2.70	2002
8547	A	QUEMETCO INC.	Industry	4.4	0.023	0.086	0.74	2010
136395	A	THOMASON MECHNICAL CORP, BENDER MACHINE	Vernon	4.40	0.001	0.99	0.02	2002
800041	A	DOW U.S.A.	Torrance	4.40	n/a	0.09	0.01	2000
93346	A	COOPER DRUM CO	S. El Monte	4.30	n/a	0.09	0.16	1997
115240	A	MARCHEM TECHNOLOGIES, LONZA INC	Long Beach	4.30	0.005	0.28	0.01	2001
131249	A	BP WEST COAST PRODUCTS LLC (c)	Wilmington	4.30	0.180	0.08	0.18	1995

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
124506	A	BOEING ELECTRON DYNAMIC DEVICES	Torrance	4.17	n/a	0.46	0.07	1995
6459	OB (2002)	HONEYWELL INTERNATIONAL INC.	Vernon	4.13	n/a	0.01	0.01	1999
18439	OB (2006)	ACE PLATING CO INC	Los Angeles	4.08	n/a	0.58	0.19	1998
118406	A	CARSON COGENERATION COMPANY	Carson	3.86	n/a	0.16	0.01	2007
45489	A	GUIDANT CORP	Temecula	3.80	0.006	1.31	0.01	2002
126060	A	STERIGENICS US, LLC	Ontario	3.80	0.000	0.00	0.01	2007
8820	A	REULAND ELECTRIC CO. H.BRITTON LEES	Industry	3.70	0.002	<0.01	<0.01	1996
9114	I	SOMITEX PRINTS OF CALIFORNIA	Industry	3.70	n/a	0.06	<0.01	1996
17325	A	ACE CLEARWATER ENTERPRISES	Paramount	3.70	0.001	0.01	0.00	2002
106838	A	VALLEY-TODECO, INC	Sylmar	3.70	0.000	0.20	0.20	2000
105598	A	SENIOR FLEXONICS INC	Burbank	3.64	0.007	0.98	0.49	2001
7427	A	OWENS-BROCKWAY GLASS CONTAINER	Vernon	3.60	0.000	0.01	0.06	2001
800007	OB (2005)	ALLIED SIGNAL INC, EI SEGUNDO	El Segundo	3.58	n/a	0.02	0.53	2000
126197	A	ION BEAM APPLICATIONS INC.	Los Angeles	3.56	0.000	<0.01	0.01	1996
127568	A	ENGINEERED POLYMER SOLUTION	Montebello	3.53	0.000	0.05	0.48	2000
151899	A	MEDALLION CALIFORNIA PROPERTIES CO	Newhall	3.51	n/a	0.02	0.20	2000
140811	A	DUCOMMUN AEROSTRUCTURES INC	Monrovia	3.50	0.007	0.01	0.01	2002
8015	A	ANADITE INC	South Gate	3.48	n/a	0.63	0.78	2003
9163	A	INLAND EMPIRE UTILITIES AGENCY	Ontario	3.44	0.001	0.25	0.01	2007
151415	A	AERA ENERGY LLC	Brea	3.40	0.020	0.05	0.00	1999
153546	A	HUCK INTERNATIONAL INC	Carson	3.30	0.017	0.00	0.02	1999
126191	A	ION BEAM APPLICATIONS INC.	Los Angeles	3.29	0.000	<0.01	0.00	1996

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
800063	A	GROVER PROD. CO	Los Angeles	3.29	0.039	0.88	0.07	2002
800189	A	DISNEYLAND RESORT	Anaheim	3.25	0.030	0.11	0.06	2009
6384	A	LA CO., RANCHO LOS AMIGOS MEDICAL CENTER	Downey	3.14	0.082	0.01	0.06	1999
11435	A	THE PQ CORP	South Gate	3.00	n/a	0.00	0.01	1998
800395	A	BP WEST COAST PRODUCTS, ARCO CARSON	Carson	3.00	0.001	<0.01	0.02	1994
10005	A	ELECTRONIC CHROME GRINDING CO, INC.	Santa Fe Springs	2.96	0.010	0.24	0.06	2001
52517	A	REXAM PLC, REXAM BEVERAGE CAN COMPANY	Chatsworth	2.93	0.0076	0.73	0.1	2009
18452	A	UCLA (REGENTS OF UC) (c)	Los Angeles	2.91	n/a	0.01	0.11	1999
2613	A	US GOVT, NAVY DEPT, NAVAL WEAPONS STN	Seal Beach	2.90	0.004	0.11	0.00	2002
16660	A	MC DONNELL DOUGLAS SPACE SYS CO.	Huntington Beach	2.89	0.001	0.23	0.05	2007
116868	A	EQUILON ENTERPRISES,LLC	Rialto	2.88	n/a	0.00	0.04	1999
800035	A	CONTINENTAL AIRLINES INC	Los Angeles	2.83	n/a	0.01	0.13	1997
48274	A	FENDER MUSICAL INST	Corona	2.81	0.004	0.03	0.37	1997
151798	A	TESORO REFINING AND MARKETING CO.	Carson	2.77	n/a	0.14	0.00	1999
151984	A	TESORO REFINING AND MARKETING CO.	Wilmington	2.75	0.002	0.00	0.01	2000
46268	A	CALIFORNIA STEEL INDUSTRIES, INC.	Fontana	2.74	0.016	0.16	0.31	1995
800030	A	CHEVRON U.S.A. INC	El Segundo	2.73	n/a	0.29	0.13	2001
5887	A	ANABOLIC INC	Irvine	2.70	0.154	0.03	0.00	1997
16642	A	ANHEUSER-BUSCH INC.(LA BREWERY)	Van Nuys	2.70	n/a	0.02	0.13	1999
25440	A	ROBERTSHAW CONTROLS CO, GRAYSON CONTROLS	Long Beach	2.70	0.003	0.00	0.96	1998
27701	A	CADDOCK ELECTRONICS, INC.	Riverside	2.70	n/a	0.02	0.06	2002
137517	A	RELIANT ENERGY ETIWANDA,LLC	Etiwanda	2.67	0.160	0.01	0.17	2000

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
133987	A	PLAINS EXPLORATION & PRODUCTION CO. LP	Inglewood	2.65	n/a	0.01	0.07	1997
134943	A	ALCOA GLOBAL FASTERNERS, INC.	Torrance	2.61	n/a	0.55	0.04	2008
35483	A	WARNER BROTHERS STUDIO FACILITIES	Burbank	2.60	0.008	0.10	0.26	1997
7949	A	CUSTOM FIBERGLASS MFG CO/CUSTOM HARDTOP	Long Beach	2.50	0.078	<0.01	<0.01	1995
79682	A	RAMCAR BATTERIES INC	Commerce	2.43	n/a	0.04	0.17	1998
800278	A	SFPP, L.P.	Carson	2.43	n/a	0.00	0.10	1999
18188	A	PLASMA TECHNOLOGY INC.	Torrance	2.40	0.000	0.11	0.00	2007
18508	A	AIR PROD & CHEM INC, PACIFIC ANCHOR CHEM	Los Angeles	2.40	0.000	0.10	0.81	1999
800202	A	UNIVERSAL STUDIOS INC	Universal City	2.40	n/a	<0.01	0.03	1996
800387	A	CALIFORNIA INSTITUTE OF TECHNOLOGY	Pasadena	2.40	n/a	0.05	0.00	2007
152033	A	TESORO REFINING AND MARKETING CO.	Long Beach	2.39	n/a	0.00	0.01	1999
133405	A	BODYCOTE INC./BODYCOTE THERMAL PROCESSING	Los Angeles	2.36	n/a	0.03	0.20	1999
1208	A	MICROSEMI CORPORATION	Santa Ana	2.30	0.004	0.01	0.01	2001
124838	A	EXIDE TECHNOLOGIES (c)	Vernon	2.30	0.010	0.53	0.04	1999
800056	A	GATX STORAGE TERMINALS CORP	San Pedro	2.30	n/a	0.00	0.03	1997
103659	OB (2007)	FOUR MEDIA CO.	Burbank	2.22	n/a	0.61	0.04	2004
99773	A	CYTEC FIBERITE INC.	Anaheim	2.20	0.000	0.04	0.19	2000
9668	A	DELUXE LABORATORIES INC, DELUXE LABORATOR	Hollywood	2.10	0.000	0.01	0.02	2000
40829	A	HAWKER PACIFIC INC	Sun Valley	2.07	0.000	0.04	0.09	2009
18931	A	TAMCO	Rancho Cucamonga	2.04	0.017	0.01	0.24	2001
142267	A	FS PRECISION TECH LLC	Rancho Dominguez	2.03	n/a	0.08	0.15	2001
800181	A	CALIFORNIA PORTLAND CEMENT CO (c)	Colton	2.00	0.001	<0.01	0.39	1996

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
2605	A	3M CO	Northridge	1.98	0.002	0.40	0.38	1996
14502	A	VERNON UTILITY DEPARTMENT	Vernon	1.98	0.000	0.01	0.01	2007
54627	A	HICKORY SPRINGS OF CAL INC	Commerce	1.95	n/a	0.01	0.48	1998
800325	A	TIDELANDS OIL PRODUCTION CO (L.B. Oil Co)	Long Beach	1.90	n/a	0.07	0.62	1999
10245	A	LA CITY SANITATION BUREAU, TERMINAL ISLAN	San Pedro	1.83	0.005	0.02	0.03	2000
23559	OB (2005)	JOHNSON CONTROLS BATTERY GROUP INC	Fullerton	1.80	n/a	0.01	0.08	2001
800003	A	HONEYWELL INTERNATIONAL INC	Torrance	1.77	n/a	0.00	0.01	1999
1947	A	THUMS LONG BEACH CO, UNIT NO.01	Long Beach	1.70	0.170	<0.01	0.14	1996
8309	A	CAMBRO MANUFACTURING CO	Huntington Beach	1.70	0.002	0.00	0.15	2000
22467	A	LEFIELL MFG CO	Santa Fe Springs	1.70	0.000	0.75	0.17	2000
82512	A	BREA CANYON OIL CO	Wilmington	1.70	n/a	0.01	<0.01	1996
119907	A	BERRY PETROLEUM	Santa Clarita	1.60	n/a	0.20	0.73	1999
119920	A	ALUMINUM COMPANY OF AMERICA	Vernon	1.60	n/a	0.30	0.30	1996
133660	A	HAYDEN INDUSTRIAL PRODUCTS	Corona	1.60	n/a	0.82	0.44	1998
107350	A	N O-RING CORPORATION	Downey	1.53	n/a	0.00	0.01	2001
2638	A	OCCIDENTAL COLLEGE	Los Angeles	1.50	0.002	0.07	0.01	2007
126536	A	CONSOLIDATED FOUNDRIES, POMONA	Pomona	1.50	n/a	0.00	0.02	1999
25070	A	LA CO., SANITATION DISTRICT (c)	Whittier	1.46	0.003	0.33	0.08	2009
44577	A	LONG BEACH CITY, SERRF PROJECT (c)	Long Beach	1.40	n/a	0.00	0.03	2000
82513	A	BREA CANYON OIL COMPANY INC	Harbor City	1.40	n/a	0.02	<0.01	1996
800408	A	TRW INC.	Manhattan Beach	1.37	n/a	0.92	0.10	1998
3968	A	TABC INC.	Long Beach	1.35	0.002	0.05	0.22	1999

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
62679	A	KOP-COAT INC	Vernon	1.33	n/a	0.00	0.49	1997
123087	A	INDALEX WEST INC.	Industry	1.27	n/a	0.00	0.03	1999
126544	A	PAC FOUNDRIES INDUSTRY	Industry	1.27	n/a	0.59	0.09	1996
2526	A	CHEVRON USA INC	Van Nuys	1.25	0.007	<0.01	0.01	1996
22551	A	THUMS LONG BEACH CO, UNIT NO.04	Long Beach	1.20	0.000	0.00	0.01	2000
42633	A	LA CO., SANITATION DIST, SPADRA LANDFILL	Walnut	1.20	0.002	<0.01	<0.01	1996
106009	A	VENOCO INC.	Beverly Hills	1.16	n/a	0.05	0.00	2005
152054	A	BREA CANYON OIL COMPANY, INC.	Brea	1.14	n/a	<0.01	0.12	1996
124806	OB (2004)	EXIDE TECHNOLOGIES	Industry	1.00	n/a	0.00	0.04	1999
800127	A	THE GAS CO.	Montebello	0.99	0.000	0.01	0.01	2009
7730	A	E R CARPENTER CO INC	Riverside	0.96	0.000	0.03	1.34	2003
20375	A	PRUDENTIAL OVERALL SUPPLY	Riverside	0.96	0.000	0.03	0.08	1997
6670	A	TRU-CUT, INC.	Los Angeles	< 1	0.000	0.00	0.04	2002
47056	OB (2005)	MYERS CONTAINER CORP	Huntington Park	0.90	0.000	0.23	2.00	2002
800301	A	ITT GILFILLAN UNIT NO.01	Van Nuys	0.86	0.000	0.12	0.19	1998
3134	A	THUMS LONG BEACH CO, UNIT NO.05	Long Beach	0.84	0.000	<0.01	<0.01	1996
18378	A	GRUBER SYSTEMS, INC.	Valencia	0.83	0.000	0.14	0.10	2004
22556	A	THUMS LONG BEACH CO, UNIT NO.02	Long Beach	0.80	0.000	<0.01	<0.01	1996
111415	A	VAN CAN CO, SUBSIDIARY OF VAN CAMP SEAFO	Fontana	0.80	0.000	<0.01	0.08	1996
120088	A	BREITBURN ENERGY CO.	Santa Fe Springs	0.79	0.000	0.01	0.04	1998
126964	A	EDWARDS LIFESCIENCES LLC	Irvine	0.75	0.000	<0.01	0.00	1995
22373	A	CONTAINER CORPORATION OF AMERICA	Los Angeles	0.74	0.000	<0.01	<0.01	1996

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
24060	A	TOMKINS INDUSTRIES INC-LASCO PRODS GROUP	Anaheim	0.72	0.000	<0.01	0.02	1996
800091	A	MOBIL OIL CORP	Anaheim	0.72	0.000	0.01	0.00	1999
772	A	DEFT INC	Irvine	0.70	0.000	<0.01	<0.01	1995
24756	A	CRANE CO, HYDRO-AIRE DIV	Burbank	0.63	0.000	0.04	0.05	1997
115394	A	AES ALAMITOS, LLC	Long Beach	0.63	0.000	0.00	0.02	1999
134931	A	ALCOA GLOBAL FASTENERS, INC.	Fullerton	0.61	0.000	1.90	0.02	2003
24957	A	GLENDALE CITY	Glendale	0.59	0.000	0.00	0.02	1999
15647	A	CUSTOM ENAMELERS INC	Fountain Valley	0.55	0.000	0.11	0.02	2000
3093	A	LA CO., OLIVE VIEW/UCLA MEDICAL CENTER	Sylmar	0.53	0.000	0.00	0.02	1999
21895	A	AC PRODUCTS, INC.	Placentia	0.53	0.000	0.00	0.00	2003
6281	A	US GOVT,MARINE CORPS AIR STATION,EL TORO	El Toro	0.51	0.000	<0.01	<0.01	1996
1634	OB (2005)	STEELCASE INC, WESTERN DIV	Tustin	0.50	0.000	<0.01	<0.01	1995
39388	A	THUMS LONG BEACH CO, UNIT NO.03	Long Beach	0.50	0.000	<0.01	<0.01	1996
61160	A	GE ENGINE SERVICES	Ontario	0.50	0.000	0.70	0.01	2003
152501	A	PRECISION SPECIALTY METALS, INC.	Los Angeles	0.45	0.000	0.38	0.15	2001
43436	A	TIMCO	Fontana	0.43	0.000	0.00	0.43	1997
18990	A	LIFE PAINT COMPANY	Santa Fe Springs	0.41	0.000	0.02	0.00	2001
12660	I	GOLDSHIELD FIBERGLASS, INC, PLANT #58	Fontana	0.40	0.000	0.01	0.05	1994
115536	A	AES REDONDO BEACH, LLC	Redondo Beach	0.40	0.000	0.01	0.04	1998
122295	A	FALCON FOAM, A DIV OF ALTAS ROOFING	Los Angeles	0.40	0.000	0.00	0.00	1999
115663	A	EL SEGUNDO POWER, LLC	El Segundo	0.34	0.000	0.00	0.01	2000
25638	A	BURBANK CITY, PUB SERV DEPT	Burbank	0.33	0.000	0.33	0.01	1996

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
124805	A	EXIDE TECHNOLOGIES	Commerce	0.33	0.000	0.00	0.04	2000
550	A	LA CO., INTERNAL SERVICE DEPT	Los Angeles	0.32	0.000	0.02	0.00	2008
112192	OB (1998)	CONSOLIDATED DRUM RECONDITIONING CO. INC.	South Gate	0.31	0.000	0.00	0.00	1997
800343	A	BOEING SATELLITE SYSTEMS, INC.	El Segundo	0.30	0.000	<0.01	0.21	1996
24520	A	LA CO, SANITATION DISTRICTS	Rolling Hills Estates	0.29	0.000	<0.01	<0.01	1998
99119	A	INTERPLASTIC CORP	Hawthorne	0.28	0.000	0.05	0.32	1999
122300	A	BASF CORPORATION	Colton	0.28	0.000	0.56	0.02	2002
19989	OB (2000)	PARKER HANNIFIN AEROSPACE CORP	Irvine	0.27	0.000	0.01	0.00	1999
107149	A	MARKLAND MANUFACTURING INC.	Santa Ana	0.26	0.000	0.06	0.12	2007
161142	A	FOAMEX L.P.	Compton	0.25	0.000	0.00	0.01	2010
102075	A	FOAMEX (c)	Orange	0.18	0.000	0.39	0.43	1994
16264	A	INTL COATINGS CO INC	Cerritos	0.17	0.000	0.00	0.00	1999
800074	A	LA CITY, DWP HAYNES GENERATING STATION	Long Beach	0.17	0.000	0.00	0.01	2000
48300	A	PRECISION TUBE BENDING	Santa Fe Springs	0.15	0.000	0.00	0.00	2002
800168	A	PASADENA CITY, DWP	Pasadena	0.15	0.000	0.70	0.00	1996
800193	A	LA CITY, DWP; VALLEY STM PLANT	Sun Valley	0.15	0.000	0.25	0.00	1999
37336	A	COMMERCE REFUSE TO ENERGY FACILITY	Commerce	0.12	0.00	0.01	0.00	2010
42676	A	AES PLACERITA, INC.	Newhall	0.11	0.000	0.08	0.01	2003
114801	A	RHODIA INC.	Carson	0.11	0.000	0.02	0.05	2006
115389	A	SO CAL EDISON CO	Huntington Beach	0.11	0.000	0.00	0.00	1999
7416	A	PRAXAIR INC	Wilmington	0.11	0.000	0.04	0.03	2001
1992	A	PRUDENTIAL OVERALL SUPPLY	Van Nuys	0.10	0.000	0.00	0.00	1997

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
16044	I	SPECIALTY ORGANICS INC	Irwindale	0.10	0.000	0.00	0.23	1997
25012	A	AMADA MFG AMERICA, INC.	La Mirada	<0.1	0.000	0.00	0.00	2002
24812	A	FARMER BROS CO	Torrance	0.09	0.000	0.00	0.02	1999
94872	A	METAL CONTAINER CORP.	Mira Loma	0.08	0.000	0.39	0.36	2002
111110	A	BRISTOL FIBERLITE IND	Santa Ana	0.08	0.000	0.00	0.02	1995
156741	A	HARBOR COGENERATION CO.	Wilmington	0.05	0.000	0.02	0.00	2002
20144	OB (2000)	CANON BUSINESS MACHINES INC	Costa Mesa	0.05	0.000	0.00	0.07	1999
800320	A	AMVAC CHEMICAL CORP.	Los Angeles	0.04	0.000	0.07	0.34	2004
45938	A	E.M.E. INC/ELECTRO MACHINE & ENGINEERING	Compton	0.04	0.000	0.00	<0.01	2001
117785	A	BALL METAL BEVERAGE CONTAINER CORP.	Torrance	0.04	0.000	0.21	0.91	2001
22229	A	PROCESSES BY MARTIN, INC.	Lynwood	0.04	0.000	0.00	0.00	2002
800075	A	LA CITY, DWP SCATTERGOOD GENERATING STN.	Playa del Rey	0.03	0.000	0.00	0.00	2000
145368	A	SEMMATERIALS LP	Fontana	0.02	0.000	0.33	0.01	1999
115586	A	SUNDANCE SPAS	Chino	0.02	0.000	0.05	0.43	1996
51620	A	WHEELABRATOR NORWALK ENERGY COMPANY	Norwalk	0.02	0.000	0.01	0.02	1996
800009	A	AMERON PROTECTIVE COATINGS DIV	Brea	0.01	0.000	0.24	0.24	2000
55711	A	SUNLAW COGENERATION PARTNERS I	Vernon	0.01	0.000	0.01	0.00	1996
124016	A	OAKITE PRODUCTS, INC.	La Mirada	0.00	0.000	0.14	0.08	2000
55714	A	SUNLAW COGENERATION PARTNERS I	Vernon	0.00	0.000	0.01	0.00	1996
119127	A	PRC DE SOTO INTERNATIONAL	Glendale	0.00	0.000	<0.01	<0.01	2002
809	A	GARNER GLASS CO	Claremont	0.00	0.000	0.00	0.00	1996
1732	OB (1997)	INTL ELECTRONIC RESEARCH CORP	Burbank	0.00	0.000	0.00	0.00	1996

Appendix A. Continued.

Facility ID	Facility Status (a)	Facility Name	City	Cancer Risk in a million	Cancer Burden	Acute Hazard Index	Chronic Hazard Index	HRA Approved (year)
1746	A	UNITED ALLOYS INC	Los Angeles	0.00	0.000	0.00	0.00	1998
3084	A	CARDINAL INDUSTRIAL FINISHES INC	South El Monte	0.00	0.000	0.00	0.00	1996
3578	A	PRUDENTIAL OVERALL SUPPLY	Carson	0.00	0.000	0.00	0.00	2000
6163	A	OHLINE	Gardena	0.00	0.000	0.26	0.72	1996
6315	A	FLO-KEM, INC.	Rancho Dominguez	0.00	0.000	0.03	0.61	1999
7010	A	PRUDENTIAL OVERALL SUPPLY	Irvine	0.00	0.000	0.00	0.00	1995
8560	A	PRUDENTIAL OVERALL SUPPLY CO	Commerce	0.00	0.000	0.00	0.00	1995
8935	A	TRAIL RITE INC	Santa Ana	0.00	0.000	0.00	0.30	1996
10656	A	NEWPORT LAMINATES	Santa Ana	0.00	0.000	<0.01	<0.01	1996
19953	OB (1997)	RISTON KELLER INC	Irvine	0.00	0.000	<0.01	0.01	1996
21544	A	US GOVT, MARINE CORPS AIR STA @BLD	Tustin	0.00	0.000	0.00	0.00	2000
22092	A	WESTERN TUBE & CONDUIT CORP	Long Beach	0.00	0.000	0.02	0.62	1997
24647	A	J. B. I. INC	Compton	0.00	0.000	0.00	0.17	1999
40806	A	ASSOCIATED PLASTICS INC	Riverside	0.00	0.000	0.73	0.20	1997
51849	A	ELIMINATOR CUSTOM BOATS	Mira Loma	0.00	0.000	<0.01	<0.01	1995
70021	A	XERXES CORP (A DELAWARE CORP)	Anaheim	0.00	0.000	<0.01	<0.01	1996
144677	A	PRATT & WHITNEY ROCKETDYNE/RUBY ACQ ENT	Canoga Park	0.00	0.000	<0.01	<0.01	1996
149241	A	VERMAX, INC.	Pomona	0.00	0.000	<0.01	0.25	1995
800018	A	BAXTER HEALTH CARE CORP, BENTLEY DIV	Irvine	0.00	0.000	<0.01	0.37	1994

Notes:

- (a) A = Active; I = Inactive; OB = Out of Business (with the year in which the facility went out of business)
- (b) The specific risk driver listed in this HRA is no longer in use & the resulting risk has been eliminated or minimized.
- (c) AQMD staff has requested these facilities to update their HRAs.
- (d) This includes risk attributable to the emergency DICE. The total facility risks excluding the emergency DICE are less than 10 in a million.

Appendix B

Rule Adoption and Amendments in 2010

Rule 1401 – New Source Review of Toxic Air Contaminants

Rule 1401 was amended to add or revise non-cancer chronic and acute risk values for acetaldehyde, acrolein, arsenic, fluorides, formaldehyde, manganese, and mercury in the Rule 1401 list of toxic air contaminants. *[September 2010]*

Rule 1420.1 – Emission Standards for Lead from Lead-acid Battery Recycling Facilities

Rule 1420.1 was adopted November 5, 2010 and establishes requirements for large lead-acid battery recycling facilities in order to meet attainment with the 2008 National Ambient Air Quality Standard for lead. Rule requirements include an ambient air lead concentration of $0.15 \mu\text{g}/\text{m}^3$ averaged over any 30 consecutive days by January 1, 2012. In addition Rule 1420.1 includes requirements to control emissions for lead point sources and fugitive emissions by requiring total enclosures, housekeeping measures, and lead abatement procedures during maintenance activity. A Contingency Compliance Plan identifying lead emission is required if a facility approaches 80 percent of the ambient air lead concentration of $0.15 \mu\text{g}/\text{m}^3$. The Plan must be implemented if the ambient lead concentration is exceeded. *[November 2010]*